its Spherical Figure. It may be polliſht upon the ſame *Plain* applying to it the Paper ſmoothly cemented on. But here it is to be conſider'd, that the poliſhing, practiſed with this Inſtrument, is very long and tedious; ſo that I would adviſe, after the Glaſs is wrought to the perfect figure on the *Plain*, to make uſe of certain Gutters * proportionable to the Sphere, whoſe Semi-diameter is repreſented by the length of the Pole above-mentioned; uſing for the reſt, the rules known and obſerved in the grinding of Convex-Glaſſes.

* Theſe *Gutters* the Author deſcribes in another part of this Book; where he ſaith, That there muſt be a *Poliſher* made in the form of a *Gutter*, excavated its whole length; which may alſo be hollow'd Spherical by means of a wooden Mould, turn'd of a Spherical figure by a Gage, fixt on a Mandril, and made to turn round: which he ſaith, may alſo be better perform'd upon certain ſquare Stones of a peculiar kind, which, when he firſt attempted the working of Glaſſes, he made great uſe of.

So far this Author of this contrivance, which though it be Ingenious and Mathematical, yet is it conceived by skilful and conſidering Artiſts, that it will be very difficult to put it into practiſe with Glaſſes of any conſiderable length; it being alſo much doubted, whether the Author himſelf hath ever uſed it, or ſeen it uſed in long Glaſſes.

An Extract
Out of the Italian Giornale de Letterati, *about two conſiderable Experiments of the* Transfuſion *of the Blood.*

Anno 1667. *May* 8. Here was made in *Bononia* at the houſe of Signior *Caſſini* this Experiment, *viz.* There was open'd the carotid Artery of a Lamb, when the bloud was let run as long as it could, into the right branch of the Jugular Vein of another Lamb, from which there had before been drawn ſo much bloud, as was judged, it could be ſupplyed with from a Lamb of the like bigneſs, whoſe bloud ſhould be let out till it dyed. After this, there were made two ligatures pretty near to one another, in the vein of the Lamb, that had received the bloud; and this vein was quite cut thorow between the two ligatures, to ſee what would happen thereupon. This done, the Lamb was untyed, which without any appearance of feebleneſs, went about, following thoſe that had made the operation. It lived a long while

while after, and its wound being healed up, it grew like other Lambs. But the 5th of *January* 1668, it dyed, and its ſtomach was found full of corrupt food. Its neck being diſſected, to ſee what had happen'd to the vein cut through, it was found, that it had joyned it ſelf to the next Muſcle by ſome fibres, and that the upper part of that vein had a communication with the lower, by the means of a little branch, which might in ſome manner ſupply the defect of the whole trunck.

There was made another Experiment the 20th of *May* laſt at *Udine*, at the Houſe of *Signior Griffoni*, by the transfuſing the blood of a Lamb into the veins of a Spaniel, of a middle ſize of that kind, 13 years old, who had been altogether deaf for above 3 years, ſo as what noiſe ſoever was made, he gave not any ſign of hearing it. He walked very little, and was ſo feeble, that being unable to lift up his foot, all he did was to trail his body forward. After the Transfuſion practiſed upon him, he remained for an hour upon the Table, where he was yet untied; but leaping down afterwards, he went to find his Maſters, that were in other Chambers. Two dayes after he went abroad, and ran up and down the ſtreets with other Dogs, without trailing his feet, as he did before. His ſtomach alſo returned to him, and he began to eat more and more greedily than before. But that, which is more ſurpriſing is, that from that time he gave ſignes, that he began to hear, returning ſometimes at the voice of his Maſters. The 13th of *June* he was almoſt quite cured of his deafneſs, and he appeared without compariſon more jocund than he was before the operation. At length, the 20th of the ſame Month he had wholly recovered his hearing, yet thus, that when he was called, he turned back, as if he that had called him, had been very far off. But that hapned not alwayes; in the mean time he heard always when he was called.

Another Extract

Out of the Italian *Journal, being a Deſcription of a* Microſcope *of a New faſhion, by the means whereof there hath been ſeen an Animal leſſer than any of thoſe ſeen hitherto.*

Euſtachio Divini hath made a *Microſcope* of a new Invention, wherein inſtead of an Eye-glaſs convex on both ſides, there are two plano-convex Glaſſes, which are ſo placed, as to touch one another in the middle of their convex ſurface. This Inſtrument, of which *Hon. Fabri* treats largely in his *Opticks* (*viz. Prop.* 46.) hath this peculiar, that it ſhews the Objects flat and not crooked, and although it takes in much, yet nevertheleſs magnifieth extraordinarily.

It is almoſt 16½ inches high, and adjuſted at 4 different lengths. In the *firſt*, which is the leaſt, it ſhews lines 41 times bigger than they appear to the naked Eye: In the *ſecond*, 90 times: In the *third*, 111 times: and in the *fourth* 143 times. Whence one may eaſily calculate, how much it augments ſurfaces and ſolidities.

The Diameter of the Field it diſcovers, or the ſubtenſe of the viſual angle, meaſured upon the Object-plate, in the *firſt* length is of 8 inches and 7 lines: in the *ſecond*, of 12 inches and 4 lines: in the *third*, of 13 inches: and in the *fourth*, of a little more than 16 inches.

As they viewed with this Microſcope the little grains of ſand ſearced, they perceived an Animal with many feet, its back white and ſcaly, but leſs than any of thoſe hitherto obſerved. For, although the Microſcope ſhewed every grain of ſand as big as an ordinary Nut, yet this Animal appeared no bigger than one of thoſe grains of ſand ſeen without a Microſcope. Whence may be concluded its ſmalneſs, which occaſion'd one of the beholders to give it the name of the *Atome of Animals*.